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South Dakota Station-Swine Breeding Project Variation- Always Present and Useful

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Ever present with the livestock producer is the variation in type, fertility, growth rate, feed efficiency, fatness, carcass quality and other items given some attention in the selection procedure. This is both a help and a hindrance to producers. Every producer likes a uniform pig crop, but if he had complete uniformity there would be no opportunity for selection and attempts at improvement.

Variation is recognized by every producer and exploited every time selection for any character or complex of characters is made. It is always present and probably not often enough given the attention deserved.

Much emphasis is being given today to swine testing programs designed to identify the top producing, good quality, meaty hogs. All these programs depend on the variation which occurs. As a result of the variation observed, pigs may or may not qualify or certify in the various programs carried on. Those that do are estimated to have a somewhat better than average genetic makeup for the characters stressed.

On the following page are shown complete litter records for three 1957 spring litters farrowed in the South Dakota Station's Swine Breeding Project. These are presented to show variation in numbers, weights and live backfat measurements. You will also have seen the live hogs in these litters and observed their variations in conformation. The standard deviation is a measure of variation in relation to the average. It says that if any pig in the litter were drawn out in some random manner, it could be expected to be above or below average by the number indicated. Note that some of the deviations are as much as 20 per cent of the size of the average. Large deviations in relation to the average indicate extreme variation, while small deviations indicate uniformity.

Genetic progress depends on the use of variation which occurs.